

**Marked-Up Copy of Claims Amended  
in the Amendment Corresponding to the  
Office Action Dated 11 December 2001**

1. (Twice Amended) A method of obtaining a cell population enriched for long-term repopulating human hematopoietic stem cells (HSCs), the method comprising isolating hematopoietic cells from a human hematopoietic tissue and separating cells that express KDR on their surface (KDR<sup>+</sup> cells) from cells that do not express KDR on their surface using a reagent that specifically binds with KDR, thereby obtaining a KDR<sup>+</sup> cell population that is enriched for long-term repopulating HSCs.

7. (Twice Amended) The method of claim 6, wherein the reagent is an antibody.

18. (Twice Amended) A method of preparing long-term repopulating human HSCs, the method comprising isolating hematopoietic progenitor cells (HPCs) that express KDR on their surface (KDR<sup>+</sup> HPCs) from a human hematopoietic tissue and separating HPCs that express KDR on their surface (KDR<sup>+</sup> HPCs) from HPCs that do not express KDR on their surface using a reagent that specifically binds with KDR, whereby the isolated KDR<sup>+</sup> HPCs are enriched for long-term repopulating HSCs.

23. (Twice Amended) The method of claim 18, wherein the further comprising isolating KDR<sup>+</sup> HPCs are isolated from the tissue using a method selected from the group consisting of isolating cells that express an early marker using an antibody specific for the early marker and isolating cells that do not express a late marker on their surface using an antibody specific for the late marker.

24. (Twice Amended) The method of claim 18, wherein the HPCs are isolated from the tissue using an antibody that is specific for an early marker selected from the group

~~consisting of CD34, Thy 1, c kit receptor, flt3 receptor, AC133, vascular endothelial growth factor receptor I, vascular endothelial growth factor receptor III, Tie1, Tek, and basic fibroblast growth factor receptor.~~

25. (Twice Amended) The method of claim 18, wherein further comprising isolating the HPCs are isolated long-term repopulating HSCs from other HPCs using an antibody that is specific for a known lineage (lin) one of an early marker and a late marker.

26. (Twice Amended) The method of claim 24 76, wherein the early marker is CD34.

51. (Twice Amended) A method of expanding long-term repopulating human HSCs, the method comprising isolating HSCs that express KDR on their surface ( $KDR^+$  HSCs) from a human hematopoietic tissue using a reagent that specifically binds with KDR and incubating the HSCs with vascular endothelial growth factor to expand the HSCs.

69. (Twice Amended) A method of isolating a stem cell capable of giving rise to at least one of a muscle cell, a hepatic oval cell, a bone cell, a cartilage cell, a fat cell, a tendon cell, and a marrow stroma cell, the method comprising isolating a hematopoietic cell that expresses KDR on its surface from a human hematopoietic tissue using a reagent that specifically binds with KDR, thereby isolating the stem cell.